UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,105	12/28/2000	Dan Eylon	6599P003X4	8847

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BLAKELY SOKOLOFF TAYLOR & ZAFMAN
12400 WILSHIRE BOULEVARD, SEVENTH FLOOR
LOS ANGELES, CA 90025

EXAMINER
PATEL, HARESH N

ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 05/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/751,105	EYLON ET AL.
	Examiner	Art Unit
	Haresh Patel	2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2004*.

2a)☐ This action is FINAL.　　2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-52* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-52* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All　b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
　　　　application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date _____.
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-52 are presented for examination.

Double Patenting

2.   Applicant submitted Terminal Disclosure statement, paper number 16, has been

acknowledged. Hence, the double patenting rejection has been withdrawn.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

4.   Claims 1, 19, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Rodriquez et. al 6,427,149 (Hereinafter Rodriquez) in view of Distributed Systems Concepts and

Design, pages 69 – 73, 99 - 101, 1995, Coulouris et. al (Hereinafter Coulouris) and in further

view of Getchius et. al 6,408,294 (Hereinafter Getchius).

5.   As per claims 1, 19 and 38, Rodriquez teaches the following.

a system, a method, a computer program product stored on a computer readable medium,

the product comprising a computer program for configuring a server with an application library

having application files stored therein to stream the application to a client, the computer program

comprising code to configure the server to:

an application library having application files stored therein (e.g., an archive file at the web server containing user necessary plug-in files, col., 4, lines 7 – 63),

a streaming manager configured to send the application files to a client as a plurality of streamlets, each streamlet corresponding to a particular data block in a respective application file (e.g., extract individual compressed files and transmit to client computer at web server, block 47, figure 3, the web server extracts only the selected files for transmission to the client computer, abstract, The web server responds by executing (47) the file extraction utilities to extract and optionally decompress the selected files from the archive file. Those extracted files are then transmitted (48) to the client computer or network client, where they are saved (49) and/or decompressed (50) by the appropriate software application. The time (45) spent waiting for the transfer to complete using this method is substantially reduced compared to the conventional method as the total data volume to be downloaded is reduced, and as unwanted data is not downloaded at all, e.g., col., 5, lines 1- 54),

Rodriguez teaches transmitting of any files including achieve files, plug-ins, video clips from a server to the client.

However, Rodriguez does not specifically mention about the term "streaming" for transmission.

Coulouris teaches the following:

streaming (e.g., the size of TCP streams is unlimited, so the TCP transport layer protocol must decompose the stream of data supplied to it by application programs into chunks of data and construct IP packets that are not more than 64K kilobytes in length, page 72, Stream

communication is used to implement some services such as remote login and file-transfer in

networked environments, pages 99-101).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Rodriguez with the teachings of Coulouris to facilitate a

communication mechanism to transfer the data modules from one computer to the another. The

motivation would be obvious because stream communication is supported by buffering which

enables the sender to get ahead of the recipient, as suggested by Coulouris.

Rodriguez and Coulouris teach streaming of any files that are stored in the archive files,

from a server to the client.

However, Rodriguez and Couloruis do not specifically mention about prediction model

and an engine to predict the streaming blocks.

It is well known in the prior art, for example, Getchus teaches the following.

a prediction model (e.g., prediction model for targeting advertisements, abstract) and a

streaming prediction engine (e.g., web server engine parsing advertisement contents as per the

prediction model, figure 4, col., 8, line 37 – col., 9, line 34) configured to identify at least one

streamlet which is predicted to be most appropriate to send to a given client at a particular time

in accordance with the prediction model (e.g., based on the client interaction web server engine

processes advertisement contents as per the prediction model to update the client web browser

with advertisements, figure 4, col., 8, line 37 – col., 9, line 34).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Rodriguez and Coulouris with the teachings of Getchus to

facilitate a communication mechanism to transfer the data modules from a server to the client in

advance. The motivation would be obvious because the streaming only necessary application modules to the client would reduce usage of network bandwidth. The client will have to download only necessary application modules sent by the server. Using the Getchus's concept of sending the application modules in advance to the client, the server would send the application modules that the client application program would need next for the execution, as suggested by Getchus.

6.   Claims 4, 6-9, 11, 12, 22, 23, 25-28, 30, 31, 39-43, 45 and 46, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodriguez, Coulouris and Getchus in view of DeMoney.

7.   As per claims 4, 22, 23, 39 and 40, Rodriguez, Coulouris and Getchus teach the claimed limitation as rejected under claims 1, 19 and 38.

However, Rodriguez, Coulouris and Getchus do not specifically mention about each streamlet corresponding to a data block in a particular application file at a particular offset and having a predefined length.

It is well known in the prior art, for example, DeMoney teaches the following.

each streamlet corresponding to a data block in a particular application file at a particular offset and having a predefined length (e.g., Another parameter may be configured to set the length of a seek reorder queue that orders storage system requests according to their physical storage address, the size of the data blocks is varied between different streams according to the rate required for a particular stream, col. 1, line 5 - col. 2, line 23).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Rodriguez, Coulouris and Getchus with the teachings of

DeMoney to facilitate accessing the preprocessed streamlets having a data block in a particular

application file at a particular offset and having a predefined length. The motivation would be

obvious because using the DeMoney's concept of known offset and length of an application

block of the stored application contents would help select the client necessary application block

easily for the application which client is referring to. Using known offset and length of an

application block would provide fast and reliable application block delivery to the client, as

suggested by DeMoney.

8.   As per claims 6, 25, Rodriguez teaches the following.

        each preprocessed streamlet is compressed (e.g., compression application program, block

78, figure 5).

9.   As per claims 7-9, 26-28, 41-43, Rodriguez, Coulouris and Getchus teach the claimed

limitation as rejected under claims 1, 19 and 38. However, Rodriguez, Coulouris and Getchus do

not specifically mention about the details of claims 7-9, 26-28 and 41-43.

        It is well known in the prior art, for example, DeMoney teaches the following.

        the streaming manager is configured to send the client upon a first initiation of the

streaming application a file structure specification of the application files, the streaming manager

is further configured to send the client upon the first initiation of the streaming application a set

of streamlets comprising at least those streamlets containing the portions of the application

required to enable execution of the application to be initiated, the application library has a startup

block comprising the file structure specification and set of streamlets stored therein (e.g.,

Another source of file requests may be the file system itself. These requests may include

requests for metadata required to support the various data streams (e.g. blocks that holds lists of

blocks to stream, such as indirect blocks). These type of metadata requests may be time critical

in that streaming will stop if a stream pointer block (indirect block) pointing to the next data

block to the stream is unavailable. Thus, request for time critical metadata also carry deadlines

and may be scheduled directly along with streaming data requests in the guaranteed rate or

deadline queue. The file system constantly monitors its progress by means of the current indirect

block. At an appropriate threshold it calculates a deadline and schedules the fetch of the next

indirect block from the storage system. Other metadata requests may be non-critical such as

other types of file management and read and write operations unrelated to streaming (e.g. listing

files in the file system, col. 11, line 1 – col. 12, line 65).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Rodriguez, Coulouris and Getchus with the teachings of

DeMoney to facilitate sending a file structure specifying structure of the application files to the

client and having the file structure stored in an application library. The motivation would be

obvious because using the DeMoney's concept of an application streaming at the server

providing the information of the files stored in the archive file to the client application would

help synchronize streaming of the application contents between the client and server

applications. Using the mechanism to maintain the server archive contents and to provide it to

the client would provide reliable and fast streaming blocks downloaded at the client, as

suggested by DeMoney.

10.   As per claims 11, 12, 30, 31, 45 and 46, refer to claims 7, 26 and 41 for rejection and

combination of references.

11.   Claims 2, 3, 5, 20, 21 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Rodriguez, Coulouris and Getchus in view of DeMoney and "Official Notice".

12.   As per claims 2, 3, 5, 20, 21 and 24, Rodriguez, Coulouris and Getchus do not

specifically mention about the details of claims 2, 3, 5, 20, 21 and 24.

It is well known in the prior art, for example, DeMoney teaches the following.

each streamlet corresponds to a file data block having a size equal to a code page size

used during file reads by an operating system expected to be present on a client system, the data

block size is four kilobytes, the predefined length comprises a code page size used during file

reads by an operating system expected to be present on a client system (e.g., data is transferred to

or from the storage systems in a constant block size. In a preferred embodiment a block size of

256 kilobytes may be chosen. The video stream manager may provide for configuration of the

block size during system initiation or configuration. The fixed block size mechanism ensures

that no external fragmentation of storage occurs and that internal fragmentation occurs only at

the last block of the file (since a file is unlikely to end exactly at a block boundary, col. 10, lines

40 - 65),

However, Rodriguez, Coulouris, Getchus and DeMoney does not specifically mention about the streamlet size of 4 kilobytes, as the page size used for the file reads by an operating system at the client device. Official Notice" is taken that both the concept and advantages of providing the streamlet size of 4 kilobytes is well known and expected in the art and would be an obvious design choice for the selection of streamlet size equivalent of the page size used for the file reads by an operating system at the client device.

13.   Claims 10, 29 and 44, are rejected under 35 U.S.C. 103(a) as being unpatentable over Rodriguez, Coulouris, Getchus and DeMoney in view of Chen et. al. 6,412,004 (Hereinafter Chen).

14.   As per claims 10, 29 and 44, Rodriguez, Coulouris, Getchus and DeMoney do not specifically mention about the limitations of claims 10, 29 and 44.

It is well known in the prior art, for example, Chen teaches the following.

the streaming manager is further configured to install streaming environment support software on the client prior to initiating an application streaming processes (e.g., The metaserver can manage both live and on-demand video streams. If a client computer wishes to watch a live event or an on-demand content, it should be prepared to wait until the event actually starts or until the tape with the requested multimedia content is installed into the multimedia server, col. 5, line 4 – col. 6, line 10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Rodriguez, Coulouris, Getchus and DeMoney with the teachings of Chen in order to facilitate streaming environment for the streaming application at

the client device before the application is executed. The client application will be able to utilize

the server sent streaming environment instantly whenever it is necessary, as suggested by Chen.

15.   Claims 13-18, 32-37, 47-52 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Rodriguez, Coulouris and Getchus in view of Stumm 5,768,528.

16.   Rodriguez, Coulouris and Getchus teach the limitations of claims as rejected under

claims 1, 19 and 38. However, Rodriguez, Coulouris and Getchus do not specifically mention

about use of data map.

It is well in the prior art, for example, Stumm teaches the following.

an application status repository comprising a data map for each active client, the data

map generally indicating the streamlets which are present at the respective client (e.g., The

database server maintains a schedule of events file adapted to contain information relating to

predetermined downloading schedules to the subscribers of the database server. The schedule of

events file or the relevant portions of it are then transmitted to individual subscribers so that

requests for information can be launched from the subscribers terminals at a predetermined time

in accordance with the schedule of event file, abstract, receiving from each subscriber an

information request in accordance with the schedule of events file and a list of existing files in

the subscriber's database including the file names, file sizes and corresponding file identification

code, col. 1 line 12 – col. 2, line 45),

determine if the data map indicates that the client already has the requested streamlet;

request an updated data map from the client and replace the data map with a returned updated

map; retrieve the requested streamlet from the application library; and update the data map upon

a successful transmission of the requested streamlet to the client, replace the data map in the

application status repository for the client with the data map received from the client, compare

the data map in the application status repository for the client with the data map received from

the client and log mismatches (e.g., receiving from each subscriber an information request in

accordance with the schedule of events file and a list of existing files in the subscriber's database

including the file names, file sizes and corresponding file identification code; transmitting to the

subscriber a set of predetermined data files as authorized by a corresponding one of the

publishers, including each file's name, size and identification code in response to the information

request from each one of the subscribers, receiving from each subscriber the name of files that

were not properly received by the subscriber along with the size of the portion of the file

received by the subscriber and the CRC code of the portion received by the subscriber;

calculating the CRC code of the portion of the file received from said subscriber, comparing the

CRC code of the portion of the file received by the subscriber with the calculated CRC code of

the portion of the file received from the subscriber; and transmitting the remaining portion of the

file to the subscriber when the CRC codes are equal, receiving from the subscribers their

corresponding local time zones and responsive thereto, transmitting a corresponding offset time

necessary to synchronize the subscriber's local time with a publisher's reference time, such that

all scheduled events take place at the corresponding publisher's reference time, downloading data

files from a server system to a subscriber's computer system, wherein the data files originated by

a plurality of publishers, the method comprises the steps of: maintaining a schedule of events file

containing a time schedule for downloading the data files; maintaining a log file for tracking the

success and failure of the events; transmitting an information request to the server system when

the event is launched at a scheduled time; receiving a group of files corresponding to a publisher

from the server system, and their corresponding filesizes and CRC codes in response to the

information request; and tracking the log file to determine whether the last event scheduled was

completed successfully, col. 1 line 12 – col. 2, line 45).

It would have been obvious to one of ordinary skill in the art at the time the invention

was made to combine the teachings of Rodriguez, Coulouris and Getchus with the teachings of

Stumm to keep track of previously send server data at the client. The use of data map will help

client application what the data is already present at the client, which need not be requested from

the server. By using the same data at the client, which was downloaded earlier, it would save

time and network bandwidth during downloading of data at the client, as suggested by Stumm.

Conclusion

17.   The present application is a continuation-in part of application number 09/120,575, which

does not contain all the claimed invention. Hence, the claimed subject matter does not benefit

the priority date.

18.   Examiner has found numerous arts related to the disclosed subject matter. The prior art

made of record and not relied upon is considered pertinent to applicant's disclosure.

See Form PTO-892.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Haresh Patel whose telephone number is (703) 605-5234. The

examiner can normally be reached on Monday, Tuesday, Thursday and Friday from 10:00 am to

8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, John Follansbee, can be reached at (703) 305-8498.

The appropriate fax phone number for the organization where this application or

proceeding is assigned is (703) 306-5404.

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the receptionist whose telephone number is (703) 305-3900.

Haresh Patel

May 7, 2004.

JOHN FOLLANSBEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100